

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Amended) A [Device] device for open-loop or closed-loop control of an electrical system and a propulsion system of a motor vehicle, with the propulsion system having an internal combustion engine and a transmission with a variable step-up and/or step-down ratio, the electrical system having a vehicle power supply system and at least one battery connected to the vehicle power supply system, and at least one electrical machine being provided, wherein said [which] electrical machine is operable during a normal charging mode as a generator for supplying current to the battery and to the vehicle power supply system from the propulsion system, [in which case the electrical machine is also] and is drivable by the propulsion system as a generator in a recuperation mode [in order] to produce a braking torque[,] and to [likewise] supply the at least one battery and the vehicle power supply system with current [in this case,] and [in which case the electrical machine] is [also] operable as an electric motor [in order to emit] for emitting torque to the propulsion system,

wherein the device controls the at least one electrical machine in different operating states by different signals, in which case a charging voltage [(U-

LADE)] for the normal charging mode is produced automatically as a voltage reference variable for controlling the electrical machine from signals from a vehicle management as a function of the respective requirements for electrical power from the vehicle power supply system and from the battery at any given time;

further wherein the device automatically provides the respective torque demand [(MXSG-MAX-MS)] at any given time as a torque reference variable for controlling the electrical machine as a function of the respective requirements, at that time, for a positive or negative torque for the propulsion system, in which case changes in the voltage reference variable [(U-LADE)] downwards and upwards are limited by predetermined torque limit values [(MXSG-MIN-MS, MXSG-MAX-MS)] for the electrical machine which define a torque tolerance band, in which further case, changes in the torque reference variable upwards and downwards are limited by predetermined voltage limit values [(U-MIN, U-REKUP; or U-MIN, U-REKUP; or U-MIN, U-GRENZ)] for the electrical machine, which form a voltage tolerance band,

means for automatic cyclic checking of the reference variables, wherein the electric machine is controlled automatically by the voltage reference variable [(U-LADE)], but a change takes place to the torque reference variable for controlling the electrical machine, provided that the tolerance bands are complied with, when and for as long as the torque reference variable demands

from the electrical machine a positive or negative torque which is not the same as the predetermined torque on the electrical machine in order to produce the charging voltage [(U-LADE)].

2. (Amended) The [Device] device according the claim 1, [wherein] further comprising a unit coordinator configured [is provided in order] to use the [two or more] respective torque requirements on the propulsion system to form the torque reference variable [which results from them].

3. (Amended) The [Device] device according to claim 1, wherein the device forms the torque reference variable as a function of torque requirements [which torque requirements] that are defined automatically for torque stabilization of individual vehicle wheels.

4. (Amended) The [Device] device according to claim 2, wherein the device forms the torque reference variable as a function of torque requirements [which torque requirements] that are defined automatically for torque stabilization of individual vehicle wheels.

5. (Amended) A [Method] method for open-loop or closed-loop control of an electrical system and a propulsion system of a motor vehicle, with the propulsion system having an internal combustion engine and a transmission with a variable step-up and/or step-down ratio, the electrical system having a vehicle power supply system and at least one battery connected to the vehicle

power system, and at least one electrical machine being provided which is operable during a normal charging mode as a generator for supplying current to the battery and to the vehicle power supply system from the propulsion system, [in which case the electrical machine] and is also drivable by the propulsion system as a generator in a recuperation mode [in order] to produce a braking torque[,] and to supply the at least one battery and the vehicle power supply system with current [in this case,] and [in which case] the electrical machine is also operable as an electric motor [in order to emit] for emitting torque to the propulsion system, the method comprising the acts of:

controlling the at least one electrical machine in different operating states by different signals, in which case a charging voltage [(U-LADE)] for the normal charging mode is produced automatically as a voltage reference variable for controlling the electrical machine from signals from a vehicle management as a function of the respective electrical power requirements [for electrical power] from the vehicle power supply system and from the battery at any given time,

automatically providing the respective torque demand [(MXSG-MAX-MS)] at any given time as a torque reference variable for controlling the electrical machine as a function of [the] respective torque requirements, at that time, for a positive or negative torque for the propulsion system, in which case changes in the voltage reference variable [(U-LADE)] downwards and upwards are limited by predetermined torque limit values [(MXSG-MIN-MS, MXSG-MAX-MS)] for

the electrical machine which define a torque tolerance band, in which further case, changes in the torque reference variable upwards and downwards are limited by predetermined voltage limit values [(U-MIN, U-REKUP; or U-MIN, U-REKUP; or U-MIN, U-GRENZ)] for the electrical machine, which form a voltage tolerance band,

automatically cyclically checking the reference variables,

controlling the electrical machine automatically by the voltage reference variable [(U-LADE)], wherein a change takes place to the torque reference variable for controlling the electrical machine, provided that the torque tolerance band[s] and the voltage tolerance band are complied with, when and for as long as the torque reference variable demands from the electrical machine a positive or negative torque which is not the same as the predetermined torque on the electrical machine in order to produce the charging voltage [(U-LADE)].

6. (Amended) The [Method] method according to claim 5, wherein a unit coordinator uses the [two or more torque] respective requirements on the torque propulsion system to form the torque reference variable [which results from them].

7. (Amended) The [Method] method according to claim 5, wherein the torque reference variable is also formed as a function of torque requirements

which are defined automatically for torque stabilization of individual vehicle wheels.

8. (Amended) The [Method] method according to claim 6, wherein the torque reference variable is also formed as a function of torque requirements which are defined automatically for torque stabilization of individual vehicle wheels.

9. (As Originally Filed) A method for operating at least one electrical machine for a motor vehicle equipped with a propulsion system, a vehicle power supply system, and at least one battery, the method comprising the acts of:

coordinating torque requirements for the propulsion system and voltage requirements for the vehicle power supply system and the at least one battery for the vehicle power supply system, by forming a voltage reference variable for the voltage requirements of the vehicle power supply system and a torque reference variable for the torque requirements of the propulsion system;

limiting the voltage reference variable by upper and lower torque limit values which must not be overshoot or undershot in an event of changes to the voltage reference variable; and

limiting the torque reference variable by voltage limit values which must not be overshoot or undershot in an event of torque changes; and

utilizing the voltage reference variable and torque reference variable to control the electrical machine in different operating states.

10. (New) An improved device for a control of an electrical system and a propulsion system of a motor vehicle with the propulsion system having an internal combustion engine and a variable transmission, the electrical system having a battery connected to a vehicle power supply system, and an electrical machine operable in a normal charging mode as a generator for supplying current to the battery and to the vehicle power supply system, with said electrical machine being also operable as an electric motor to emit torque to the propulsion system as a function of a torque demand, the improvement comprising a voltage signal generator for producing a voltage reference variable as a charging voltage for controlling the electrical machine in a normal charging mode, and a torque demand generator for producing a torque reference variable for controlling the electrical machine in a propulsion mode, wherein the voltage reference variable and the torque reference variable are dependent on each other in that a permissible variation of the voltage reference variable is limited by torque values, and a permissible variation of the torque reference variable is limited by voltage values.

11. (New) The improved device as in claim 10, wherein the torque values are minimum and maximum torque demands that form a torque tolerance

band, and the voltage values are minimum and maximum voltage signals that form a voltage tolerance band.

12. (New) The improved device as in claim 10, wherein the improvement further comprises the torque reference variable being changeable so long as a value of the torque reference variable is not the same as a predetermined torque value required to produce the charging voltage.

13. (New) The improved device as in claim 10, wherein the torque demand comprises a breaking torque demand.

14. (New) The improved device as in claim 10, further comprising an automatic cyclic checking module for automatically and cyclically checking respective values of the torque reference variable and the voltage reference variable.